DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-019300
Date Inspected: 17-Jan-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC)

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Li Yang and Zhu Zhong Hai

Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Bike Path at Bay # 10

This QA Inspector performed Dimension Control Inspection on the Bike Path bottom plate for flatness check across the longitudinal butt weld. Flatness check was performed on following mentioned Bike Paths and Bike Path are identified as:

BK004A-033.

The QA Inspector measured the flatness using 600mm long straight edge across the Butt (CJP) weld and using 1500mm long straight edge between the stiffeners which are plug weld to bottom plate.

Observed flatness within the allowable tolerance.

The result of the inspection was informed to ZPMC QC Supervisor Mr. Xu Le Feng, ABF Mr. Man Kam Hon and

Caltrans Lead Inspector Mr. Mark Miller and Mr. Hiranch Patel.

Tower Grillage (Lift 5) – East

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angle Piece of Tower Grillage East to the Transverse and Longitudinal Stiffeners at the Bottom Face. Inspected the bolt tensioning on a random basis. The Inspection was performed against Notification No. 00614 dated January 17, 2011.

The bolt sizes used were M27 x 220 RC Lot # DH4DM270002 and the final torque value established was 1200 N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

The bolt sizes used were M24 x 200 RC Lot # DH4DM240100 and the final torque value established was 597 N-m.

The bolt sizes used were M24 x 160 RC Lot # DHGM240074 and the final torque value established was 443 N-m.

The bolt sizes used were M24 x 100 RC Lot # DHGM240077 and the final torque value established was 597 N-m.

The bolt sizes used were M24 x 120 RC Lot # DHGM240096 and the final torque value established was 627 N-m.

The bolt sizes used were M24 x 170 RC Lot # DHGM240062 and the final torque value established was 596 N-m.

The bolt sizes used were M24 x 140 RC Lot # DHGM240026 and the final torque value established was 520 N-m.

The Manual Torque wrench used was Serial No. XO2-747.

Please reference the pictures attached for more comprehensive details.

Tower Grillage (Lift 5) – West

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angle Piece of Tower Grillage West to the Transverse and Longitudinal Stiffeners at the Bottom Face. Inspected the bolt tensioning on a random

basis. The Inspection was performed against Notification No. 00614 dated January 17, 2011.

The bolt sizes used were M27 x 220 RC Lot # DH4DM270002 and the final torque value established was 1200 N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

The bolt sizes used were M24 x 200 RC Lot # DH4DM240100 and the final torque value established was 597 N-m.

The bolt sizes used were M24 x 160 RC Lot # DHGM240074 and the final torque value established was 443 N-m.

The bolt sizes used were M24 x 100 RC Lot # DHGM240077 and the final torque value established was 597 N-m.

The bolt sizes used were M24 x 120 RC Lot # DHGM240096 and the final torque value established was 627 N-m.

The bolt sizes used were M24 x 170 RC Lot # DHGM240062 and the final torque value established was 596 N-m.

The bolt sizes used were M24 x 140 RC Lot # DHGM240026 and the final torque value established was 520 N-m.

The Manual Torque wrench used was Serial No. XO2-747.

Tower Grillage (Lift 5) – South

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angle Piece of Tower Grillage South to the Transverse and Longitudinal Stiffeners at the Bottom Face. Inspected the bolt tensioning on a random basis. The Inspection was performed against Notification No. 00614 dated January 17, 2011.

The bolt sizes used were M27 x 220 RC Lot # DH4DM270002 and the final torque value established was 1200 N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

The bolt sizes used were M24 x 200 RC Lot # DH4DM240100 and the final torque value established was 597 N-m.

The bolt sizes used were M24 x 160 RC Lot # DHGM240074 and the final torque value established was 443 N-m.

The bolt sizes used were M24 x 100 RC Lot # DHGM240077 and the final torque value established was 597 N-m.

The bolt sizes used were M24 x 120 RC Lot # DHGM240096 and the final torque value established was 627 N-m.

The bolt sizes used were M24 x 170 RC Lot # DHGM240062 and the final torque value established was 596 N-m.

The bolt sizes used were M24 x 140 RC Lot # DHGM240026 and the final torque value established was 520 N-m.

The Manual Torque wrench used was Serial No. XO2-747.

Tower Grillage (Lift 5) – North

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angle Piece of Tower Grillage North to the Transverse and Longitudinal Stiffeners at the Bottom Face. Inspected the bolt tensioning on a random basis. The Inspection was performed against Notification No. 00614 dated January 17, 2011.

The bolt sizes used were M27 x 220 RC Lot # DH4DM270002 and the final torque value established was 1200 N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

The bolt sizes used were M24 x 200 RC Lot # DH4DM240100 and the final torque value established was 597 N-m.

The bolt sizes used were M24 x 160 RC Lot # DHGM240074 and the final torque value established was 443 N-m.

The bolt sizes used were M24 x 100 RC Lot # DHGM240077 and the final torque value established was 597 N-m.

The bolt sizes used were M24 x 120 RC Lot # DHGM240096 and the final torque value established was 627 N-m.

The bolt sizes used were M24 x 170 RC Lot # DHGM240062 and the final torque value established was 596 N-m.

The bolt sizes used were M24 x 140 RC Lot # DHGM240026 and the final torque value established was 520 N-m.

The Manual Torque wrench used was Serial No. XO2-747.

Please reference the pictures attached for more comprehensive details.

Segment 12BW to Segment 12CW (Transverse Splice at Side Panel)

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW12E-001. The welder identification was 041713 and 044551 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel transverse splice weld, Counter Weight side.

Please reference the pictures attached for more comprehensive details.

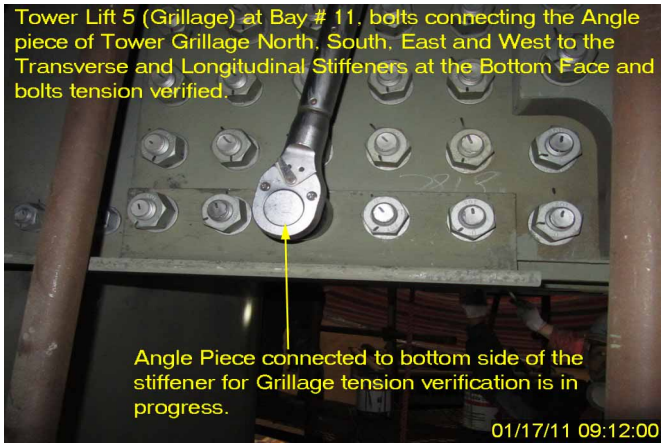
Segment 12BW to Segment 12CW (Transverse Splice at Side Panel, Corner Assembly)
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA3012-011. The welder identification was 040611 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel transverse splice weld, Counter Weight side.

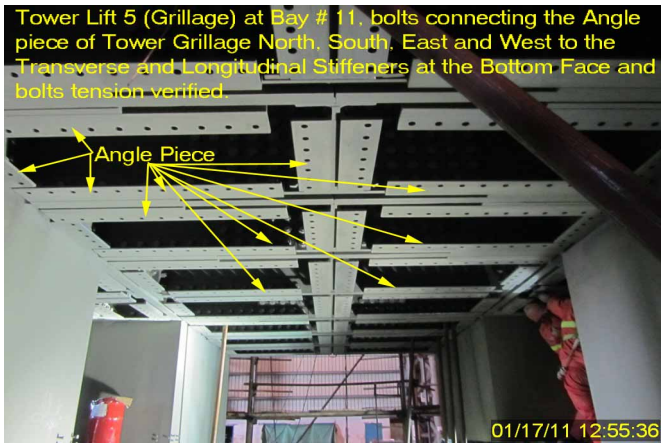
Please reference the pictures attached for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

(Continued Page 6 of 7)





Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 7 of 7)

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer